



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,344	11/18/2003	Maxim Pribytko	X-1442 US	8185
24309	7590	03/22/2005	EXAMINER	
XILINX, INC ATTN: LEGAL DEPARTMENT 2100 LOGIC DR SAN JOSE, CA 95124			NGUYEN, KHANH V	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/717,344	PRIBYTKO ET AL. 	
	Examiner	Art Unit	
	Khanh V. Nguyen	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 18-26, 28-30 is/are allowed.
- 6) Claim(s) 1-4, 7-13, 16, 17, 27 and 31 is/are rejected.
- 7) Claim(s) 5, 6, 14 and 15 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 November 2003 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/18/03</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Objections

Claims 1, 18, 20, 28 are objected to because of the following informalities:

Claim 1, lines 5 and 6, "the differential input pair" should correctly be --the differential input transistor pair--.

Claim 1, line 6, "the differential input pair" should correctly be --the differential input transistor pair--.

Claim 1, line 6, "the differential input transistor" should correctly be --the differential input transistor pair--.

Claim 18, lines 18 and 19, "the differential input pair" should correctly be --the differential input transistor pair--.

Claim 18, line 19, "the differential input pair" should correctly be --the differential input transistor pair--.

Claim 18, line 22, "the differential input transistor" should correctly be --the differential input transistor pair--.

Claim 18, lines 18 and 19, "the differential input pair" should correctly be --the differential input transistor pair--.

Claim 20, lines 3 and 4, "the differential input pair" should correctly be --the differential input transistor pair--.

Claim 28, lines 4, 5, 8, "the differential input pair" should correctly be --the differential input transistor pair--.

Art Unit: 2817

Claim 28, page 21, line 2, "the differential input pair" should correctly be --the differential input transistor pair--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9, 16, 17, 27, 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 7, 9, it is not clear which "amplifier section" is intended for boosting the transconductance of the cascode current mirror section.

Regarding claims 8, 31, it is not clear which "first amplifier" and "second amplifier" are intended.

Regarding claims 16, 17, the method of "boosting the transconductance" is not clearly described in the specification.

Claim 27 recites the limitation "***the*** different input pair" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2817

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 10-13, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Muza (6,556,081).

Regarding claims 1, 10, 27, Muza (Figs. 3A, 3B) discloses a single-ended amplifier having common-mode feedback comprising: a differential input transistor pair (M31, M32) for receiving a pair of input voltages (INP, INM); a current source (2I) for providing current to the differential input pair; an output transistor (M40/M42) for conducting an output current proportional to a difference between the pair of input voltages applied to the differential pair; and a common-mode feedback (306) of Figure 3B coupled to the differential pair having the function thereof.

Regarding claims 2, 11, wherein Figs. 3A and 3B disclose current mirrors (M47, M33/M34 and M41, M42) which can be read as a cascade current mirror.

Regarding claims 3, 12, wherein current mirror (M47, M33/M34) can be read as a first current mirror and current mirror (M41, M42) can be read as a second current mirror having the connections thereof.

Regarding claims 4, 13, wherein the current mirror (M41, M42) and output transistor (M42) can be scaled to provide a desired current ratio.

Allowable Subject Matter

Claims 5, 6, 14, 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18-26, 28-30 are allowed.

Claims 5, 6, 14, 15, 28-30 call for, among others, a common-mode feedback differential pair.

Claims 18-26 call for, among others, a sample and hold circuit and a comparator circuit having the connection and function thereof.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references () show further analogous prior art circuitry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**KHANH VAN NGUYEN
PRIMARY EXAMINER
Art Unit: 2817**